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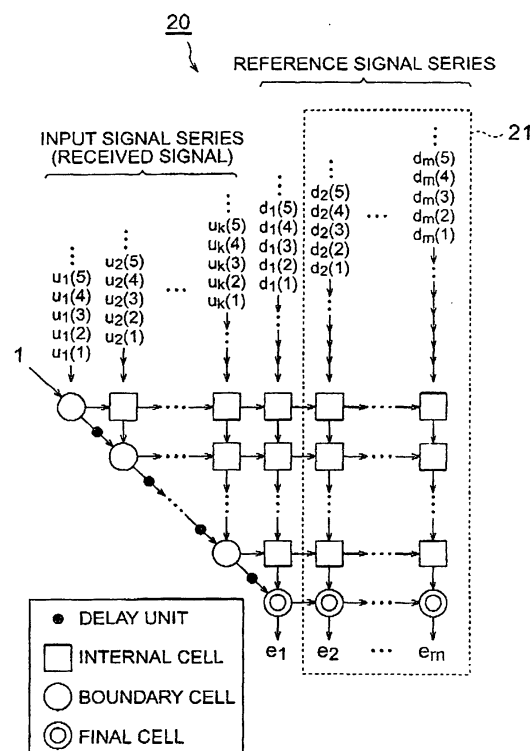
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(54) Systolic array device

(57) When a plurality of reference signal series are handled with the same input signal series during processing of an RLS algorithm based on QR decomposition, an object is to handle the plurality of reference signal series simultaneously. When performing processing of a sequential least-squares algorithm based on QR decomposition, to a configuration comprising a plurality of boundary cells (empty circles) which calculate appropriate rotation parameters for transformations based on Givens rotation, a plurality of internal cells (squares) which cause rotation of elements of a received data vector using the calculated values of the boundary cells (empty circles), and a final cell (double circles) which derives the a posteriori estimated error from the calculated values of the boundary cells (empty circles) and internal cells (squares), additional internal cells (squares) within 21 are connected so as to receive signals output from each of the internal cells (squares) arranged in the end cell column to which the signal series is input, and to the final cell (double circles) is connected an additional final cell (double circles) within 21, so as to receive the calculated values from the boundary cells (empty circles) and the calculated values from the additional internal cells (square) input to the additional final cell (double circles).

Fig.1





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EUROPEAN SEARCH REPORT

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EP 02 01 5672

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 018 065 A (MCWHIRTER JOHN G ET AL) 21 May 1991 (1991-05-21)	1-3	G06F15/80 H03H21/00
Y	* column 3, line 57 - column 4, line 7; figures 2,3c * * column 4, lines 36-44 * * column 6, lines 1-3 *	4-6	
X	----- LEWIS P S: "SYSTOLIC ARCHITECTURES FOR ADAPTIVE MULTICHANNEL LEAST SQUARES LATTICE FILTERS" JOURNAL OF VLSI SIGNAL PROCESSING SYSTEMS FOR SIGNAL, IMAGE, AND VIDEO TECHNOLOGY, KLUWER ACADEMIC PUBLISHERS, DORDRECHT, NL, vol. 2, no. 1, 1 September 1990 (1990-09-01), pages 29-36, XP000228885 ISSN: 0922-5773 * page 35; figure 8 *	1	
D,Y	----- KEERTHI A V ET AL: "SEPARATION OF COCHANNEL SIGNALS IN TDMA MOBILE RADIO" IEEE TRANSACTIONS ON SIGNAL PROCESSING, IEEE, INC. NEW YORK, US, vol. 46, no. 10, October 1998 (1998-10), pages 2684-2697, XP000860860 ISSN: 1053-587X * page 2688 - 2690, chapter IV *	4-6	TECHNICAL FIELDS SEARCHED (Int.Cl.7) G06F H03H
A	----- SIMON S. HAYKIN: "Adaptive Filter Theory" 1986, PRENTICE HALL, ENGLEWOOD CLIFFS, NEW JERSEY, XP002286549 * page 526 - page 528 *	1-3	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 30 June 2004	Examiner Kamps, S
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document			

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